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Old Way . . .

CURING RICKETS in the CLEFT of an ASH TREE

FOR many centuries,—and apparently down to the present time, even in this country—ricketic children have been passed through a cleft ash tree to cure them of their rickets, and thenceforth a sympathetic relationship was supposed to exist between them and the tree.

Frazer* states that the ordinary mode of effecting the cure is to split a young ash sapling longitudinally for a few feet and pass the child, naked, either three times or three times three through the fissure at sunrise. In the West of England, it is said the passage must be "against the sun." As soon as the ceremony is performed, the tree is bound tightly up and the fissure plastered over with mud or clay. The belief is that just as the cleft in the tree will be healed, so the child's body will be healed, but that if the rift in the tree remains open, the deformity in the child will remain, too, and if the tree were to die, the death of the child would surely follow.

*Frazer, J. G.: The Golden Bough, vol. 1, New York, Macmillan & Co., 1923.

It is ironical that the practice of attempting to cure rickets by holding the child in the cleft of an ash tree was associated with the rising of the sun, the light of which we now know is in itself one of Nature's specifics.

New Way . . .

Preventing and Curing Rickets *with* MEAD'S OLEUM PERCOMORPHUM

NOWADAYS, the physician has at his command, Mead's Oleum Percomorphum, a Council-Accepted vitamin D product which actually prevents and cures rickets, when given in proper dosage.

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THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction.
Your participation by membership is solicited.

Vol. XVI DECEMBER, 1946 No. 10

A SCHOOL HEALTH UNIT*

HELEN A. CARY, M.D.
Director, Division of School Hygiene
Portland, Oregon

School health service has come far since its entrance into the field of public health. The program has expanded from that of an inspection for communicable disease to a program embracing all phases of protection of the school child. In those cities where there is not adequate trained personnel, the program may be quite sketchy, whereas in those places where there is adequate trained personnel an entire health service is given. In spite of these facts, when one tries to obtain advice on the proper space arrangement and equipment needed to conduct even the simplest program, there is practically no information available either from school administrators, architects, or those engaged in the conduct of school health service. Letters were sent out to various cities where good health services were known to be carried on, to the consultant in Hygiene of the United States Office of Education, and to the Commissioner of Education of the United States. Answers were received, but from only two sources was actual information given, namely Dr. Mace of the State Department of Education of the State of New York, and from the Department of School Hygiene of Philadelphia, Pa. In the booklet from the consultant of Hygiene of the Office of Education there were three plans in the appendix with no specifications, while the information from the Office of the Commissioner of Education of the United States referred to ten printed articles. Some of these were not available, and others either mentioned the health room in passing or concentrated on the gymnasium and play fields. In one of these where plans for the gymnasium were illustrated, the medical examining room was indicated, but it is of interest to note that the size of this room was just about one-half the size of the custodian's office, which was also included in the plan.

No modern school system is willing to undertake the instruction of essential subjects without at least a minimum of equipment, yet to date very few have given any thought to the require-

*Prepared for the Program of the American School Health Assn., November 1, 1946.

ments of the health service and its administration. The nurse's room in any school is a very important factor in the conduct of her service. Its physical space and equipment are determining factors in a successful school health service. When the facilities are makeshift, the service, no matter how well organized, is makeshift, but when the facilities are good the poorest service is better. We all know that some excellent work has been carried on under some of the most trying conditions, and that the standard of health service has grown and developed in spite of makeshifts, but we also know that better work, higher standards, and greater security for the participating personnel can be brought about by attention to the proper equipment and space facilities necessary to do a good job. It seems that it should no longer be necessary for highly trained professional persons to put time and energy into making something do, thus sacrificing service to children because of a lack of understanding by the general public, administrators and architects as to the extent of service given and its needs.

In considering a standard health room there are many things which have to be taken into consideration—is it an urban or a rural school? Is it a generalized program with school service part of the set-up or is it a specialized school program? What services are offered? Does it serve a community need? The philosophy of the program and the type of service offered are the main determining factors in planning a health unit in a school.

Does the philosophy include the care of sick children at school or does it provide plans for the transferral of this care to the parents? Many school systems still cling to the concept of infirmary care of children who appear sick on arrival at school or who become sick during the day. Prior to making plans, the ideology to be followed must be determined. In communities where children come for long distances by bus, such as union schools in sparsely settled communities, infirmary care is a necessary part of the unit. But in communities where parents can be reached reasonably soon and the responsibility turned over to them, infirmary care can be kept at a minimum and the service of the health personnel devoted to the constructive, preventive, and counciling phase of the program. Believing in the latter type of service and having seen it work, even in a community where mothers as well as fathers were working in war industries, my remarks will be directed towards the planning of a health unit which includes only a minimum set-up for infirmary care. Where infirmary care is included this can easily be adjusted in the plans by the addition of space to give this service.

The next point to be considered is the location of the school, whether urban or rural. If urban, the thought must be given to the size, number of pupils served, distance from which pupils come and the extent of service offered. This has to be considered in relationship to the community set-up of service, whether specialized or generalized in character. Where a specialized program is offered under the supervision of the school administration, there is a certain curtailment of the extent to which the services may go, for it includes only the individual child in relationship to his school situation, while the generalized program would have a broader aspect and include the school child as a part of the family and the community. If the service is specialized, then much more of the time of the nurse will be spent in the health unit, working with the child and the parent through school consultations, whereas in the generalized program the nurse would be a community worker, going and coming as the needs of the children and the school program required. There are varying degrees of adjustment of the specialized and generalized program, and as the latter seems to be gaining in acceptance, the needs of this type of program must be given thought. In the generalized program much can be done by the health service to keep a watchful eye on the pre-school child and the infant to see that the continuity of health supervision is maintained, and that the child as a part of a family unit and community set-up has available all factors which have a bearing on the individual's health. In addition many schools are including nursery schools in their programs.

The community or union school serving sparsely settled areas has almost a greater need of the best facilities because of the health problems encountered. The nurse is generally the county health nurse, and her time cannot be definitely scheduled, since she also has the responsibility of the entire family. Good accommodations in a union school would make possible a more complete service through use of the school health unit as a community health center. Public health problems of the family could be handled here with benefit to the child in the school and in the home. A continuity of health supervision could be maintained, with the school personnel accepting some of the responsibility under the guidance of professionally trained personnel. In union schools, however, more space would be necessary for infirmary care. This could be cut to a minimum by good community health supervision and health education of the families served.

The small country school in isolated areas needs a definite health unit; the nurse who visits these schools ought to give her

time all to the actual needs of the individual rather than spending part of her time in adjusting space and equipment to meet the needs and the problems at hand. In this instance it would not need to be a room used only for the nurse, but a plan whereby she could have, by prearrangement with the principal, certain equipment and space where privacy would be available. It might be that the principal, who is usually a teaching principal, could release his office so that when the nurse planned to visit the school that the room would be made available for her, and that her cupboards with all necessary materials and filing space would be at her disposal. No satisfactory program can be carried on in these small schools when physical examinations have to be made in the classroom behind screens while the class is in session. Again, this use of a private office could serve by good planning as a community center for health.

The second main point to consider in planning a health unit is that of service offered. Beyond the basic services of communicable disease control requiring individual inspection of suspected cases, physical examinations by qualified physicians' consultation service, conferences with parents, teachers, and principals, immunization clinics for school children, and in some instances for pre-school children there seems to have developed in some parts of the country the feeling that laboratory service should be included in the health unit. Before planning to include this service in any school program, it would seem wise to survey the community facilities to see to what extent this is really needed. In most districts there are local laboratories with whom arrangements may be made to take care of laboratory needs of students, if and when it is thought advisable. If, however, it seems wise to include laboratory service in the school program, then it would again seem that this should be part of a central clinic service rather than in the individual school. Laboratory work is expensive and technicians competent to give satisfactory service would have to be on duty to carry out the tests, for it is recognized that no school administrator would wish to utilize the time of a public health nurse in doing technical laboratory work when there is such a limited number of public health nurses throughout the nation now. If then, the laboratory service is included, it would need to be considered not in the individual unit, but in a central clinic. Health education of the parent in teaching them how to find the needed attention could be stressed, and let them assume the responsibility for seeing that the tests were made. In most state health depart-

ments there is a laboratory division, which could be utilized by the small isolated communities.

The dental services must be considered in relationship to the whole program, whether corrective work is to be carried on at the school or whether it is to be a dental program of education and examination with utilization of the local dentist for correction of defects. Here again the central clinic could be made to include facilities for the correction of dental defects, in those instances in which the family has no financial resources to care for the attention. This would make it necessary then to plan for the dental program according to the needs for dental examinations and conferences, as in the case of the medical examinations.

It would seem that this paper is a brief for the philosophy of school health service and a listing of the services to be given rather than a paper on the health unit. But to quote the old adage "a workman is known by his tools" holds good here, for if a satisfactory program is to be maintained, then it is also necessary that the personnel have tools to work with, and that they be the best available. The health unit developed to meet the needs of the program then requires proper location, adequate space, sufficient equipment as tools with which the public health trained personnel have to work and by which they can carry out creditable professional standards of work.

After having decided upon the philosophy of your program and the services which are to be offered the next question is—where shall the health unit be located? In every instance, it is believed that the health unit should be located in the administrative group. This is necessary in both elementary and secondary schools. The public health nurse works with the entire school staff and should be located where she can be contacted easily by all. Then, too, she has her records on health in the unit and they should be available to the school administrators. Often health records need interpretation to the lay worker, and the nurse should be given an opportunity to furnish all pertinent information with the interpretation both to administrators and to teachers who have the pupil under supervision. The master health file should be so located that the nurse does not have to go through a lot of extra files to obtain the needed information. So many student problems are based on health problems that the nurse should be contacted by the individual teacher, health councilor, or principal in all conference cases. With this in mind, then the best possible location is within the administrative group. In secondary schools there is a

tendency to locate the health unit in connection with the physical education department, but this would cut off easy access to the public health nurse for many of the other teachers who also need information about all the pupils under their supervision. This does not mean that there should not be very close coordination of the physical education program with the health service but that it will be more inclusive if all teaching personnel have closer contact with the nurse. Parents may more easily find the nurse for conferences if she is not too far away from the administrative center. If the health unit is located in the physical education group then it would be necessary either to have duplicate files on health records for the office and one for the nurse or there would be considerable loss of time in conveying information to the administrative office from the file located in the physical education department where the nurse would have her working file.

The unit itself would contain the basic rooms, namely; waiting room which may be utilized by the nurse as her work room, a consultation room for physical examinations and medical consultation, dressing rooms, supply closet, lavatory and wash room for the nurse, a garment closet, a room for emergency care, a dental department including waiting room and examining room. The waiting room should be large enough to accommodate clerical help either paid or voluntary. The rooms other than the nurse's work room, examining room and dressing rooms could be used jointly by the dental department and medical department personnel. The size and extent of the entire unit would depend upon the number of persons served. It can easily be understood that there is no one perfect plan for a health unit which meets all needs. Absolute plans cannot be presented but the point previously stated should be those considered when making plans for health service in schools.

When a school system is carrying on a building program or remodeling it would seem advisable to consult with those who are charged with the conduct of the program so as to find out their needs and confer with the architects as to the requirements for such a program. All the conveniences suggested for a health unit might not be possible at the beginning, but the basic needs should be thought out and the floor space provided with the understanding that the minimum requirements be provided to start with and that a progressive plan for building up the unit be provided.

In 1945 a committee of public health nurses and health education teachers was appointed by Superintendent Spalding of School District Number 1 Portland, Oregon, when it was thought that a

new building could be built to replace one which had been burned down, to draw up a set of plans for a health unit. The committee worked for several months contacting school systems in Canada and in the United States as well as other related groups, but they could not find any system which could offer help. They worked out a floor plan and equipment which was presented to the superintendent and accepted by him. This plan with a slight change is available to you in the mimeograph form with equipment specifications for each room other than the dental section which was not available at this time. The plan as furnished to me by the committee was published in the Health, Physical Education and Recreation Journal, May 1946. This committee was chaired by Miss Jean Ackerman, Health Education teacher of Abernathy School. The unit as presented would be adequate to serve schools with a population up to 2000 pupils. The plan is quite similar in many details to that presented by the Philadelphia School System and also contains many of the suggestions made by Dr. Mace in his recommendations to the schools of New York State. I shall not go over the plans, but hope that you may study them at your leisure and that this will stimulate other health service divisions to study the problem. As new plans are made, they should be referred to a committee made up of School Administrators, Architects, Public Health Physicians and Nurses, Dentists and Teachers for the purpose of standardizing health units and giving help to others needing suggestions. Such a program would give dignity and standing in the community to public health workers and impress upon the citizenry the high professional rating of the service.

* * * * *

Hawaii.—Word has been received that lack of trained teachers may force two sight-saving classes in the Territory of Hawaii to close. The Department of Public Instruction is most anxious to fill vacancies either by permanent contracts or by use of the exchange system for teachers. Sight conservation field work positions are also open in the Bureau of Sight Conservation and Work with the Blind. Anyone interested in these opportunities should write either to the Bureau of Sight Conservation and Work with the Blind, Building C. Palace Grounds, Honolulu 2, T. H., or to Mr. Earl McTaggart, Director of Personnel, Department of Public Instruction, Honolulu, T. H. From *Eye Health and Safety News*, November, 1946.

SPECIFICATIONS—SCHOOL HEALTH UNIT*

We are presenting this plan of "An Ideal Nurse's Unit" based upon information from experience, from sources obtained from other school districts with like programs, from architects who have been called upon, and from Health Agencies and Universities who have specialized on this specific problem.

I. LOCATION OF UNIT

A. Size—24 ft. by 36 ft.

B. Ground floor, centrally located with northern exposure.

II. DIVISIONS

A. **Nurse's Room.**

1. Size—15 ft. by 24 ft.
2. Directly accessible from corridor, communicating with dressing room, conference room, rest room, lavatory, and cupboards.
3. Equipment—
   a. Assistant's desk and chair.
   b. Bulletin board for posters and announcements.
   c. Magazine and pamphlet rack with display table.
   d. Map, to be pinned on wall, of district on which schools and streets are marked.
   e. Folding screen.
   f. Umbrella rack.
   g. Electric clock.
   h. Scales to be kept in nurse's room and not to be used for any other purpose but weighing and measuring of the children.
   i. Padded benches along the wall for waiting children and mothers.
   j. Line 20 ft. long, marked and painted on floor with permanent finish, for testing eyes.
   k. Vision testing box.
   l. Adjustable non-glare mirror (12 in. wide - 6 in. deep) on the inside of vision box door for watching eye movements of child being examined. Door and mirror constructed so that it can be adjusted at varying angles.

B. **Dressing Room.**

1. Size—9ft. by 15 ft.
2. Communicating directly with nurse's room and conference room.

*Specifications as reported by a committee appointed to study the problem of standards for a School Health Unit in the Portland, Oregon, public schools.

3. Contains three dressing booths with table, mirror, and hooks on wall for clothes in each booth.
4. Benches along wall of booths with space for shoes underneath.
5. Clothes hamper.

C. **Conference Room.**

1. Size—16 ft. by 15 ft.
2. Communicating with nurse's room and dressing room.
3. Sound proof.
4. Equipment—
   a. Desk and five chairs.
   b. Adjustable light on arm for looking into throats.
   c. Wash basin with foot pedal (hot and cold water faucets 1). Mirror over wash basin.
   d. Paper towel rack.
   e. Dry soap container.
   f. Refuse container with foot pedal.
   g. Electric clock.
   h. Bulletin board for posters.
   i. Locked filing cabinet on casters.
   j. Telephone on desk.
   k. Connection with school loud speaker or telephone system so that nurse can call teachers for children when she needs them. This will eliminate nurse or monitor for going after them, thus more time will be available and utilized for important health problems.
   l. Folding screen (two).
   m. Locked first aid cupboard with counter.
   n. Drinking fountain.
   o. Paper cup container.
   p. Electric service outlet with electric plate on fireproof table.
   q. Triple mirror with etched straight line six inches from edge of center mirror for posture instructions.
   r. Electric heater.
   c. Electric fan (oscillating small one on heavy pedestal).

D. **Rest Room.**

1. Size—6 ft. by 8 ft.
2. Adjoining nurse's room.
3. In the case of a high school, there should be two rest rooms, one for boys and one for girls.

4. Equipment—
   a. Flat boxed spring cot, 3 ft. by 6 ft., covered with washable muslin cover and pad; pillow with like covering.
   b. Clothes cupboard with space for shoes.
   c. Chair.
   d. Mirror and table.

E. Lavatory.

1. Size—6 ft. by 8 ft.
2. Communicating with nurse's office.
3. Wash basin with foot pedal (hot and cold water faucets).
4. Paper towel rack.
5. Dry soap container.
6. Sanitary napkin container.
7. Toilet and toilet paper rack.
8. Built in chest over basin for toilet articles and mirror on outside of door. Light over this.
9. Waste receptacle with foot pedal.

F. Recessed Cupboards.

1. Size—6 ft. by 8 ft.
2. Communicates with nurse's room and next to rest room.
3. Cupboards built in wall enclosed to ceiling to eliminate dust catchers.
4. One section, 3 ft. by 3 ft., to be a nurse's clothes closet with sliding door with lock.
   a. Shelf on top for hats.
5. Remainder of space utilized in drawers, cupboards, and shelves.
6. Lower portion of cupboard lined with cedar and large enough to store blankets.
7. Supplies—
   a. Extra blankets, sheets and pillow cases.
   b. Blankets have removable slip covers, so that they can be frequently washed. This would eliminate constantly having dirty blankets and also cut down on the cleaning bill.

III. SPECIAL CONSIDERATION

A. Upper part of corridor wall (6 ft.) made of translucent glass.

B. Double convenience outlet plugs in all rooms on at least two walls.

C. All rooms air conditioned.
D. Shades to match rest of school.
E. Green tinted walls in all rooms.
F. All rooms well lighted with indirect lighting.
   1. At least 15-foot candlepower in all parts of each room.
G. Ceilings should be acoustic celotex.
H. All corners to be rounded as they can be kept cleaner and more sanitary.
I. All heating pipes to be enclosed in walls and where they are exposed they should be covered with appropriate coverings to avoid burns, which occur too frequently.
J. Door stops on all doors.
K. Hot water heating units which is the cleanest system.

* * * * *

Fellowship in Health Education,—Fellowships leading to a Master's Degree in Public Health in the field of Health Education are being offered to any qualified United States citizen between the ages of 22 and 40, according to a statement released by the United States Public Health Service, Federal Security Agency. Tuition, travel expenses for field training and a stipend of $100 a month will be provided out of funds furnished by the National Foundation for Infantile Paralysis.

Candidates must hold a bachelor's degree from a recognized college or university and must be able to meet the entrance requirements of the accredited school of public health of their choice. In addition to the degree, courses in the biological sciences, sociology, and education may be required. Training in public speaking, journalism, psychology, and work in public health or a related field are considered desirable qualifications.

The year's training, which *begins with the* 1947 *fall term,* consists of eight or nine months academic work including: public health administration, epidemiology, public health and school health education, problems in health education community organization, and information techniques, and three months of supervised field experience in community health education activities.

Application blanks may be obtained by writing the Surgeon General, United States Public Health Service, Washington 25, D. C., and must be filed prior to March 15, 1947.

Veterans are encouraged to apply and will be paid the difference between their subsistence allowance under the G. I. Bill of Rights and the monthly stipend of $100. Employees of local and state health departments are not eligible since federal grants-in-aid are already available for such training purposes.

DUTIES AND FUNCTIONS OF THE HEALTH COORDINATOR AT THE SECONDARY LEVEL*

C. MORLEY SELLERY, M.D.
Director of Health Services
Los Angeles City Schools

As the school health program has grown in complexity the need for better coordination of the activities of all school health personnel has become more apparent. Newer concepts of health education and health services have resulted in the gradual addition of various health specialists to the school health family, each one having a specific responsibility for some phase of the health of the individual school child. This relatively recent trend has greatly accentuated the need for an assignment of some individual in the school who has definite responsibility for coordinating all health measures aimed at improving the health of the child.

In many schools the vice-principals in addition to their many other responsibilities have attempted to carry out this coordinating and planning function with variable success. The counselor is bowed down with problems of program planning; the attendance supervisor is fully occupied with his duties of truancy control and social welfare. In all too many secondary schools the school physicians have only time for the examination of athletes and the school nurse is at best a part-time employee who visits the school once a week to carry out a limited follow-up program in connection with the physician's recommendations and to confer with faculty members with regard to other health problems which have arisen in her absence.

Into this sometimes chaotic, more or less planless health program the health coordinator is thrust. To be successful he should have a special background, interest and aptitude in the health field. He should be selected not because of seniority or political influence on the faculty, although it is a definite asset if he is well-known and highly regarded by his conferees. His most important attributes should be health, diplomacy, tact, cooperativeness, sympathy, social concern, and a sense of humor. In general, the function of the health coordinator is to do for the school health program what his name implies, to coordinate and implement all of the various contributions of school personnel on behalf of pupil health.

This function of coordination is indispensable to the realization of an effective school health program because so many of the school

*Presented before the American School Health Association Annual Meeting, Cleveland, Ohio, November 11, 1946.

health personnel are part-time employees who visit the school once or twice a week or once a month. Their contact with classroom teachers and their problems is sporadic. They are all trying in their own sphere to be doing something helpful for the same child. Without coordination their well-meant efforts may be ineffectual or even harmful. Too often we have found that the school physician's finding never got beyond the health card file in the gymnasium or health office; or children with frequent absences because of health or socio-economic reasons remain a case history in the attendance supervisor's record. Children with mental and emotional health problems are studied by teachers and counselors to no effect because all the facts were not known. The specialists who could help were not consulted and their information and advice were not utilized.

Health coordination should not be a spare period or extracurricular activity. Such an assignment is largely an empty gesture. It is fair neither to the so-called health coordinator nor to the other school health personnel. If the demands and opportunities of the position are considered it is indeed a full-time job. If the immediate appointment of a full-time health coordinator is impractical on account of insufficient teaching staff, a minimum of three periods daily should be arranged for this work. In carrying out his functions, a diversity of duties has been suggested for the health coordinator. How many of these duties are actually carried out will depend on the amount of time provided for this service.

Duties of the Health Coordinator

1. To stimulate healthful attitudes and practices in the lives of pupils and staff by promoting a positive and dynamic health program.

2. To assist the principal in the organization of a health committee.

So diverse and complex a problem as health coordination involving practically all members of the school personnel obviously calls for the establishment of a general health committee as a policy forming body. In organizing a health committee it is advisable to commence with the individuals most interested. Personnel of the health committee might include as many of the following individuals as the principal deems necessary and desirable in his local situation.

Principal
Vice-Principals
Registrar
Science Teacher
2 Physical Education Teachers
2 Corrective Physical Education Teachers

Counselor
Attendance Supervisors
Home Economics Teacher
Physician
Nurse
Dentist
Chairman of Student Health and Other Subcommittees
Social Living Teacher
Senior Problems Teacher
Cafeteria Manager
Custodian
Health Chairman of P.-T. A.
President of Student Body
Teachers with Special Health Interests
Teaching Nurse

In some schools the principal provides the leadership and acts as chairman of the health committee; in others, the health coordintor fulfills this function and is responsible that the policies of the health committee are carried out.

The health committee is one of the best methods for orienting each member of the faculty to his individual responsibilities for pupil health and for coordinating school, home, and community health activities.

3. To help utilize the school physician's services to the best advantage.

The most efficient use of the school physician's time depends on careful planning. If routine examinations are being made, the children can be examined during the gym period, a specified number being scheduled each hour. If, however, the pupils to be examined are mostly specially referred cases, careful arrangements must be made with the classrooms teachers, hall passes secured, and the correct number arranged per period.

4. To assist in selection of pupils to be examined by the school physician.

a. By careful follow-up and checking on health cards of pupils. When pupils are transferred from another school, health records should be carefully checked to see whether the pupil is on a modified activity program or has some still uncorrected physical defect.

b. By consulting with classroom teachers and school nurse with regard to those pupils with special health problems.

c. By conferring with the attendance officers, registrar and school nurse regarding pupils frequently absent from school on account of illness.

d. By consulting with the counselor regarding pupils who are maladjusted or behavior problems.

e. By arranging screening procedures for discovery early in the school year of pupils with defects of eyes, ears, or posture.

5. To be responsible for care of the physician's health record cards, follow-up cards, and files with a view to their order, com-

pleteness, and availability for use by all of the school staff; obtaining health records from the schools when necessary.

6. To keep the various members of the school staff informed of the health needs of individual pupils as determined by the school physician, dentist, nurse, attendance supervisor, counselor, or other health specialist.

One of the most important duties of the health coordinator is to see that all of the information regarding pupil health needs, either physical, mental, emotional, or social is available and known not only to the classroom teacher but to all those who have special responsibilities of programming and guidance.

7. To follow through on physician's recommendations with regard to special programs; to see, for example, that teachers are informed as to which children should be wearing glasses, that action is taken regarding those referred to sight saving, lip reading classes, and corrective physical education.

8. To check health records of pupils engaged in extracurricular activities, such as, office messenger, cafeteria helpers, candidates for student body offices, and arrange for special health examinations where necessary.

9. To facilitate the follow-up program for correction of physical defects by checking on all clinic appointments, reminding all students of dates of clinic appointments.

Much valuable and scarce clinic time is lost through failed appointments. The missed appointments can be cut down to a minimum by an alert and efficient health coordinator with time to function.

10. To discuss with the attendance supervisors or registrars health and educational factors in truancy and poor attendance, and bring to bear all of the guidance facilities of the school in the study of each individual problem.

11. To cooperate with health service staff in arrangements for health surveys; e.g., immunization and vaccination campaigns; audiometer tests; tuberculosis, dental and athlete's foot surveys.

12. To be chairman of sub-committee on health instruction so that duplication and gaps in the health curriculum may be avoided.

13. To arrange student health committees for active participation in the health program. Student health committees on safety, playground and classroom sanitation, cafeteria and home lunches, and health libraries have proven effective devices for promoting better health practices.

14. To set up procedures for the evaluation of the health program, for example:

a. By checking on percentage of reported physical defects actually corrected.

b. By checking with classroom teacher on improvement of pupil attitudes, behavior, and progress.

c. By checking on improved attendance, incidence of dental disease, growth increases, and nutrition.

In some schools health coordinators, because of lack of physicians' and nurses' time, have been given responsibility for the readmission of children following illness, for first aid, and the supervision of the isolation room. Obviously great care should be exercised that the health coordinator should not assume responsibilities for which he is not trained and that the duties of both the school nurse and the health coordinator should be clearly defined.

In those schools where full-time nurses are assigned, the health coordinator will have fewer duties connected with health supervision and pupil health counseling. Much more time will be devoted to coordinating the health services with the health instruction program and to developing a comprehensive coordinated, graded and functional health instruction program based on pupil needs and interests.

* * * * *

REVIEW

The Challenge of Polio, *Roland H. Berg,* The Dual Press, New York, 1946; pp. 208, price $2.50.

An extremely interesting discussion of the history of poliomyelitis; of its ancient lineage, of its ravages, of the repeated efforts to find a sure fire means of protection against it, to prevent by drugs, by sprays; and of efforts to find a sure cure of the disease or at least to develop a treatment that would prevent the dreaded, crippling paralysis. So far, success has been slight. The claimed results of special procedures are fogged, too, by the extravagant claims of protagonists of special types of treatments, and by the fact that many recoveries are spontaneous, and without paralysis. The hope lies in research, on which millions of dollars are now being spent. Chas. H. Keene, M.D.

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THE PHYSICIAN'S JOB IN THE SCHOOL HEALTH PROGRAM

JOHN E. BURKE, M.D.*
Assistant Superintendent of Schools
Schenectady, N. Y.

The physician in education who is employed as an educator and as I understand it that is the basis on which most school physicians are employed, isn't altogether clear as to just how inclusive his work is unless he is assigned a very specific job. He may be hired to examine students once a year. In addition to this examination some physicians may be hired to examine other school personnel periodically. Some may be asked to inspect school properties and pass on their sanitation. In some of the larger cities, where more than one physician is employed either whole or part time and where nurses, dentists and dental hygienists may be employed, a physician oftentimes administers the health program.

The trend it seems to me in New York State is to employ physicians for the strictly professional medical work for which they are trained. Not too many well trained physicians are supplementing their medical training and hospital experience with work in education that familiarize them with the various teaching techniques and relationships. It is likely that for a number of years this condition will prevail since physicians are not too plentiful. It seems to the speaker that our education philosophy in secondary education is very unsettled. The trend in public schools is to include more and more things in education. It, of course, has been a long time since the reading and writing and arithmetic philosophy was generally followed. It seems, however, that progressive educators are including in public school education everyone who lives in the particular community. Pre-kindergarten or nursery schools are being advocated and in many places are a reality. The adult education programs in many places are quite extensive. The school buildings are open all day and most of the night during week days.

*A few years ago the Governing Council of the American School Health Association voted to establish, in honor of the late William A. Howe, M.D., the organizer, first President and for a number of years Secretary-Treasurer and Editor, an honor award to be given to members of the Association, who, over a long period of years, had rendered outstanding professional and personal service to the Association and to the furtherance of the health of the school child. It is expected that at the time of the presentation of the award the recipient will give an address relating to the Association and to the cause of school health. The above article is the address presented by one of the three Honor Award recipients of this year. A resumé of his personal and professional career is also presented. The paper and citation of the two other recipients, Charles H. Keene, M.D., and John Lundwall, M.D., will be published in the Journals of January and February.

*A recipient of the Howe Award.

Oftentimes special educational programs are held on Sundays. This extension of education that is publicly financed would seem to be a step in the right direction. It surely is an attempt to make real to everyone the old adage that we should never stop learning or something that means that.

In the face of all the changes that are taking place in our education programs, the health program does not remain static. This group does not need to have the health work in public education reviewed. You are all familiar with it. You all know that when physicians were first employed in schools the thought with reference to their duties was not as inclusive as it is today. Obviously the physician employed in an educational program today, with this program becoming much more extensive each successive year will need to be thinking in terms of the total health of all individuals in both the school and adult community. He will need to work closely with the health officer or officers of the adult community in which his schools are located. He will need also to cooperate with all social and welfare groups in his adult community. He will be one of the best instruments connected with the schools in promoting good and healthful public relationships. In addition to the traditional duties of the school doctor, it will be necessary for him always, in dealing with students and adult school personnel, to be thinking in terms of their total health. While many physicians smile when psychosomatic medicine is mentioned, it is a splendid descriptive term for what we mean. Most physicians, of course, have always known that one's thinking has much to do with one's well being and this must always be given consideration. The school physician who is thinking in terms of total health will be able greatly to assist principals, teachers and others concerned with the subject matter fields. In teacher training institutions today a great deal of attention is given to the matter of child growth and development. Our young teachers are many of them quite adept in practicing the psychology which amounts to what we have been calling psychotherapy. It is likely that this is as it should be. Surely, we are all coming more and more to feel that maybe the schools should be more interested in the promotion and development of personality than in making Willy a good English student or a good mathematician.

All about us we see plenty of people who academically have profited by going to school. We also see many of these same people who are failures in spite of their academic preparation because they are incapable of filling adequately a niche in life which they

have selected. There will be so much, then, for the school doctor to do in all individual relationships with children, teachers and parents. One wonders if in due time whether or not the promotion of health may not become socialized as the promotion of education has been. If this happens, it will mean, of course, that schools will assume the responsibility for children's health as they do for children's education. Paralleling this health education work, it may be that during the child's public school life, he will become sufficiently educated with reference to individual and community health matters that he will seek reputable help when and where he needs it and assume responsibility for this.

JOHN EDWARD BURKE*, son of Thomas W. and Esther Langley Burke, born Saratoga, New York, February 15, 1883. He did pre-medical work at Union College for two years. On October 16, 1907, he was married to Grace Louise Fabrey. Graduated from Albany Medical College in 1915.

In 1916, he was appointed School Medical Examiner in Schenectady and the following year became Chief Medical Inspector.

In 1918 and 1919, he served as First Lieutenant in World War I in the Neuropsychiatric Service. In 1942, he was retired as a Major, on disability.

From 1920 to 1929, he engaged in general medical practice, during which time he did Post Graduate work at P. and S. in Neurology and Psychiatry, Public Health at Albany Medical College and Columbia University and was on the Medical Staff at Ellis Hospital from 1924 to 1934. From 1925 to 1939, he taught extension courses at Columbia and Syracuse Universities and taught summer school at Syracuse University from 1937 to 1941. In 1930, he accepted appointment as Assistant Superintendent of Schools in Schenectady in charge of the school health program, which position he still holds.

Among other posts held by Dr. Burke were: Secretary, Vice President and President, respectively, of the Schenectady County Medical Society; President, American Association of School Physicians; of the New York State Association of School Physicians and of the Schenectady Torch Club.

He is a member of: National Education Association; Department of Superintendents of National Education Association; New York State Teachers Association; Schenectady Teachers Association; New York State Health and Physical Education Association; New York State Medical Association; New York State Regents Advisory Council on Health and Physical Education; Schenectady County Medical Society and New York State School Physicians' Association.

He is a Fellow of the American Medical Association; American Psychiatric Association; American Public Health Association, and the American School Health Association of which he is a Past President.

He served as Co-Editor of the 1942 Year Book on Health Education of the Department of Superintendence of the National Education Association.

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*Citation by Charles L. Outland, M.D.

THE PLUS SPHERE TEST*

DAVID VANDERSLICE, M.D., M.S.P.H.
Director of School Health Program
Flint, Michigan

Historically, one of the earliest activities in school health work, was the testing of the visual acuity of school children, for it has long been recognized that visual distinctness and visual effort are closely related to the quality of a child's school work.

The prime objectives of a school vision test are 1: to assure educators that each child has ample visual acuity so that he can progress in a normal school life; 2: to prevent the progress of pathological conditions by their early recognition; and 3: to help the visually handicapped by early diagnosis of their errors so that they can be placed in special education classes.

The Snellen test was devised in 1862 and ever since this date, the great majority of school children have first found out about their vision defects as a direct result of routine school vision tests.

The Snellen test is a very good method of finding pupils who are nearsighted. These pupils have difficulty in seeing what is on the blackboard and can see well only when reading matter is held close to their eyes. Nearsighted children in most cases do not complain of symptoms of eye strain.

Although cases of nearsightedness are nearly always discovered with the Snellen test, farsightedness is rarely uncovered and then only the very severe types are revealed.

It is known, however, that farsightedness is a much more common defect than nearsightedness and that many farsighted children are severely handicapped in their school work. It is apparent, therefore that the Snellen test does an incomplete job of screening out children with handicapping vision defects.

The far-sighted eye, or hyperopic eye, is usually a short eyeball. In the case of the hyperopic eye, the rays of light entering the eye-at-rest are never brought to a focus because the focal point lies behind the retina. The image is therefore blurred. To correct this error a biconvex lens of proper focal length is placed in front of the eye to converge the rays slightly before entering the eye, then to be brought to a focal point on the retina.

Many hyperopic eyes are able to overcome the optical defect by the power of accommodation. When this is overdone, the symp-

*Presented before the American School Health Association Annual Meeting, November 11, 1946, at Cleveland, Ohio.

toms of eye strain arise. With continued near-use of the eyes the print or near work becomes blurred, the eyes water and headache may occur, especially toward the end of the day. These symptoms may become so aggravated that to do near work is very uncomfortable and the child, therefore, does not like school work.

Until recently there has been no accurate, simple way to bring to light cases of farsightedness. Observations by teachers of signs and symptoms of eye strain have been utilized, but this method reveals only a small per cent of the cases of latent farsightedness. *The Plus Sphere test* is one of a battery of tests which make up the Massachusetts Vision test. It is designed to detect those pupils who pass the Snellen test but who are farsighted sufficiently to cause fatigue, nervousness and poor concentration.

The Massachusetts Vision test, developed in 1938 by a staff of opthalmologists, educators and psychologists, has been given to hundreds of thousands of school children in twenty-one different states. The largest experience has been gained in the states of Massachusetts and New York.

The administration of the Plus Sphere test is not difficult, nor time consuming. The test can be given by the teacher and the test equipment is uncomplicated and inexpensive.

A Snellen (Symbol E) Chart is used for the test. This is placed at eye level, 20 feet from the child to be examined. The chart should be illuminated to about 10 ft. candles, with no glare or shadows on the chart. The plus sphere glasses are placed on the child and, as with the Snellen test, the vision in each eye is tested separately by holding a card in front of the eye not being tested, care being taken that no pressure is brought against the covered eye and also that both eyes remain open during the test.

A window card is used to expose one symbol of the Snellen Chart at a time. The sequence of the symbols is changed to lower the chances of memorizing. The child is asked to read *the* 20 *line* on the Snellen Chart: if he can read the line correctly he is farsighted. The child who is not farsighted will complain that the symbols are blurred, for the plus sphere glasses will shorten the focal length of the reflected rays and prevent them from coming to a focus on the retina.

With the normal eye at rest all objects beyond 20 ft. are observed without any change in the intrinsic mechanism of the eye, as rays of light reflected from objects at a distance of 20 ft. or more enter the eye practically in parallel lines and the refractive power of the normal eye at rest brings all parallel rays to exact

focus on the retina. In order that the eye may clearly see objects less than 20 ft. away it must adjust its refractive power so that the divergent rays of light reflected from near objects and entering the eye will be brought to a focal point on the retina. This adaptive mechanism of the eye is called accommodation. To make the crystalline lens more convex in order to converge the light rays, the ciliary muscle contracts and permits the ligaments supporting the elastic lens to slacken. The lens bulges more in the antero-posterio diameter, thereby becoming more convex.

Only those who pass the Snellen test are given the plus sphere test.

Statistics reveal that approximately 7% of the children tested fail the plus sphere test compared with about 17% who earn a score of 20/30 in both eyes on the Snellen test. A somewhat lower percent of the children who fail the plus sphere test are fitted with glasses, than those who fail the Snellen test.

It is acknowledged that the plus sphere test is open to some controversy. The amount of plus sphere (1.50) has been criticized as being too much by some and too little by others. Some persons with farsightedness (hyperopia) of plus 1.50 will not relax their accommodation and consequently will be unable to see through the lenses. It may be said, however, that the referral limits were set by a group of nationally prominent ophthalmologists after a two year study in which over 6,000 children were tested and checked against an ophthalmologist's examination. The plus 1.50 lens represents a happy medium. It is suggested by some ophthalmologists that plus 1.75 lenses be used for children up to the age of 8 or 9 years since they can accommodate more easily than older children.

Wide differences exist in the practices of individual eye specialists in the matter of fitting children with small refractive errors. Some specialists prescribe treatment for all so-called borderline cases, while others decline to fit any of them. The relative accuracy and the popularity of a school vision test are found to rest to a considerable extent upon the professional philosophy of local specialists. It is important, therefore, that local ophthalmologists be made familiar with the test, its development and its medical status before it is introduced into a school system.

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EDITORIALS

At the annual meeting at Cleveland, Ohio, November 11-14, 1946, the Governing Council of the American School Health Association was faced with an extremely regrettable situation. Helen Ahrens Cary, M.D., had sent to the Secretary-Treasurer her resignation as President-Elect and as President of the Association. Her reasons were adequate and wholly personal. She had already retired from her professional position as Director, Division of School Hygiene, Department of Health, Portland, Oregon.

Dr. Cary has served the cause of school health vigorously, earnestly and effectively, continuously since the organization of the American Association of School Physicians in 1927, and of its successor, the American School Health Association. To these Associations she rendered faithful and valuable service as member, fellow and member of the Governing Council, as Vice-President, and President-Elect.

It is a matter of great regret to the officers, members of the Governing Council, and other friends of long standing that Dr. Cary found it necessary to take the action she did. Resolutions to this effect were adopted by the Governing Council at its Cleveland meeting, and sent to Dr. Cary.

Under the Constitution of the Association when the office of President becomes vacant the President-Elect automatically becomes President.

S. B. McPheeters, M.D., President, most courteously volunteered his resignation as President, effective at midnight Wednesday, November 13th. This resignation the Governing Council accepted.

Dr. Cary became President at that time.

Under the Constitution the office of President becomes vacant at the end of the Annual Meeting. Therefore at the close of the meeting on Thursday evening, November 14th, the newly elected President, Walter Wilkins, M.D., succeeded President Cary. The newly elected President-Elect D. Vanderslice, M.D., also took office at that time.

The Association is to be congratulated on the high quality and earnestness of its newly elected officers:

President: Walter Wilkins, M.D., of Florida.

President-Elect: David Vanderslice, M.D., of Michigan.

Vice-President: Chairman of Membership Committee, V. K. Volk, M.D., of Michigan.

Vice-President: Chairman of the Program Committee, Cyrus H. Maxwell, M.D., of New York.

* * * * *

The year just closed has been one of the most successful in the history of the Association. The Membership Committee under Chairman Vogt did a splendid job. The Journal has been well received.

During the year, some 6,000 reprints have been sold, and the number of members and subscribers to the Journal has increased over 40%.

* * * * *

Some of the readers of this page will not receive the January Journal. Under the rules of the Governing Council those whose dues or subscriptions have not been paid for more than a year are to be dropped at the end of this calendar year.

The Journal is supported largely from these sources. It cannot be issued without funds. It cannot carry those who do not contribute financially.

* * * * *

The Program presented at the Annual Meeting at Cleveland was one of the best in the Association's history.

Monday was used wholly for the sections and dinner meeting of the Association. These covered the field of school health ranging from clinic rooms in school buildings, through nutrition, coordinator's functions, tuberculosis, and rheumatic fever to the contributions of the receivers of the William A. Howe Awards.

Programs of joint sessions held with various sections of the American Public Health Association during the following days also were excellent, reaching into the Fields of Nutrition, the Teacher's Place in the School Health Program, School Health Legislation, Rural Child Health, the Techniques of Vision Testing, and the Physical Inspection of School Children.

A study of these programs gives one some concept of the enormous range and detail of the present day School Health Program.

The majority of these presentations will be published in the *Journal of School Health* as time and space permit.—*C.H.K.*

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ABSTRACTS AND NOTES

Trends in Dental Education,—In this article Dr. Miner discusses the history of dentistry in the past one hundred years. During the first seventy-five years of its existence, dental education was chiefly concerned with the technics of repair and replacement, with training in digital skills, and with the problems of improving its technical and mechanical procedures.

There are several reason why the mechanical aspects of dentistry should have received almost exclusive attention in the education of a dentist through the first seventy-five years, but the one of greatest influence—the one that outweighed all other considerations—was the lack of a body of knowledge which warranted the concept that dental disease was in any way related either in cause or effect to disease in other parts of the body. The aims and objectives of this period were to make competent technicians. The fact that men came from all over the world to get training in American dentistry is evidence of how well the dental schools were achieving their objectives in this period.

Somewhat more than twenty-five years ago a new and important development in dental education took place. Since that time there has been a mass of evidence piling up from laboratory and clinical research which proves how closely the problems of health and disease within the mouth are related to the problems of general health or physical disability. The pressure of this growing body of knowledge makes the dentists' participation in activities dealing with the general health of the community a necessity. This development of new knowledge naturally also had a profound effect on dental education for it placed a responsibility on the dental schools for so training men that they could participate effectively in community and individual health measures.

So strong was this pressure that there has been a tendency to make dental education a part of medical education. This has re-

sulted in marked resentment on the part of the dentists, and Dr. Miner claims that whenever dentistry is under the domination of medicine it losses much of its effectiveness and initiative. The English believe that their dentistry is inferior to that in the United States because in England dentistry is dominated by medicine. Dr. Miner suggests that we should broaden the base of dental education by more effective relations not only with the medical school but also with the school of public health and the graduate school and the school of education. This will result in the closer coordination of dental and medical education. To accomplish this satisfactorily will require that the barnacles of traditional prejudice be scraped off both dentistry and medicine and that the problem be approached with a truly scientific attitude by both groups. Consideration of public welfare demands that this forward step be made. Reciprocally its accomplishment unquestionably will result in the professional improvement of both dentistry and medicine. Abstracted by Cyrus H. Maxwell M.D., State Education Department, Albany, N. Y., from *Trends in Dental Education*, Leroy M. S. Miner, D.D.S., M.D.

* * * * *

Accidents—Chief Killer of School Children,—Accidents take the lives of about 6,500 school children a year in the United States. Although the death rate from accidents among youngsters has declined markedly in recent decades, the reduction has not kept pace with the decline from disease. As a result, accidents are now the leading cause of death among school children.

Motor vehicle accidents accounted for 185 deaths, or for more than one third of the total of 507 deaths from accidents among boys, and for 73, or more than two-fifths of the 171 accident fatalities among girls. The great majority of these motor vehicle accidents occurred while the youngsters were crossing the street or highway, or while they were playing in the road.

Drownings were responsible for nearly one fourth of the accidental deaths. Almost one fourth of those drowned were reported to have fallen into the water while playing on the bank of the water, on a rock ledge, dock, bridge, guard rail, or overhanging tree. Several of the youngsters lost their lives when they fell through thin ice on ponds or lakes. About one fifth of the drownings occurred outside the water sports season May to September.

More than 10 percent of the fatalities in this insurance experience were due to burns, conflagrations, or explosions. Nearly one half these victims were trapped in burning homes. It is clear from the table that younger school children still play with matches despite the wide-spread effort that has been made to impress upon parents the danger involved. A number of children succumbed to

burns suffered while playing with or near inflammable liquids. Unfortunately, children, and for that matter, many adults as well, do not realize adequately the great danger of fire and explosion from kerosene or other flammable fluids, especially gasoline.

Firearm accidents played an important role in the toll among boys at the school ages. Forty-eight, or nearly 10 percent of the fatalities among boys, resulted from shooting accidents. Playing with, examining, or showing guns to companions were common causes of accidents of this kind. Eight of the boys, most of them in their early teens, were killed in hunting accidents. Now that another hunting season is getting into full swing, parents should take heed of the great dangers youngsters run in setting out to hunt alone or with other inexperienced young companions. Aside from these hunting fatalities, accidents resulting from shooting at tin cans or other targets caused the death of five boys.

Seven girls and one boy in this insurance experience accidentally strangled themselves or broke their necks while playing with ropes. In several of these instances the youngster was attempting to imitate a hanging seen in the movies or read about in stories. Similarly, the fascination that railroad trains and tracks hold for young boys results in numerous accidents. Nineteen of the insured youngsters were killed last year in accidents on railroad rights-of-way, and of this number, seven were killed while walking along or playing on tracks. Two of the victims were actually sitting on the tracks and watching trains pass.

It is outstandingly clear from the analysis here presented that many children could be saved from accidental death if parents kept closer watch over them. Abstracted from the *Statistical Bulletin of the Metropolitan Life Insurance Co.*, September, 1946.

* * * * *

Immunization of All Children Against Diphtheria. — Local health officers and school health authorities are urged to pool their resources in an all-out campaign to effect the maximum number of initial and booster inoculations of all children who have not been adequately protected against diphtheria.

The need for decisive action toward this goal is indicated by the world-wide increase in diphtheria incidence. In the United States, the greatest rise has been in the East North Central and Eastern States. In New York State, the upward trend began in 1945 and is still progressing. The number of cases reported during the first nine months of the current year (281) is the highest for any corresponding period since 1934. All sections of the State have been involved but the greatest concentration of cases has been in

Erie County, where there were 115 cases and 10 deaths, and in Nassau County where 39 cases and 2 deaths occurred between January 1 and September 1, 1946. The age of maximum incidence is six years.

It appears probable that there will be a considerable increase in the number of cases during the next few months in many parts of the State. Every effort should be made now while the weather is still good to organize, and promote attendance at, diphtheria immunization clinics.

Diphtheria can be controlled and virtually eliminated by early and repeated immunizations with diphtheria toxoid. The general procedure recommended by the State Department of Health is the following:

> Starting at six months of age, two doses of one milliter each of diphtheria alum-precipitated toxoid should be administered at one-month intervals. Children given an immunizing treatment during infancy should also receive a single reinforceing dose of one milliter fluid or alum-precipitated toxoid before entry into school or, in the presence of an epidemic of diphtheria in the vicinity, a reinforcing dose after three years. Children beyond fifteen years of age and adults especially exposed, including teachers, nurses and physicians found to be Schick-positive, should be actively immunized. In order to minimize local and constitutional reactions in members of these groups, it is desirable to carry out a preliminary "toxoid reaction test," non-reactors to receive toxoid and reactors possibly small doses of suitably diluted toxoid.

The State Education Department has recommended that each school administrator discuss this problem with his school physician and make plans to have the immunization records of all school children reviewed in the school year and a list made of students who have not received both initial immunizations and booster doses. When the list is completed, the matter should be discussed further with the school health personnel, representatives of the local physicians, the local health officer, and Parent-Teacher Association. Responsibility for immunization against diphtheria is primarily the duty of the health officer and he should assume leadership in coordinating the efforts of the above groups so as to secure a maximum degree of community protection against this disease.

It must always be emphasized that community protection against diphtheria can be achieved only by a high percentage of immunization in infancy and that primary immunization should never be delayed until school age. From *Health News*, New York State Department of Health, October 21, 1946, p. 173.

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